REMARKS

Claims 17-37 are pending in this application. Reconsideration is requested based on the following remarks.

Response to Arguments:

The Applicants appreciate the consideration given to their arguments, and the new grounds of rejection. Further favorable consideration is requested. T

Claim Rejections - 35 U.S.C. § 103:

Claims 17-20, 29, and 33-36 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,883,887 to Take et al. (hereinafter "Take") in view of U.S. Patent No. 6,493,540 to Suzuki (hereinafter "Suzuki"). The rejection is traversed. Reconsideration is earnestly solicited.

In the claimed invention, a counting procedure is effected to determine whether radio bearers for multi-cast MBMS services, or individual radio bearers, are to be set up, as described at page 2, paragraph 2, continuing to page 3, paragraph 3, of the International Published Application. The goal of the claimed invention is thus not to receive acknowledgments from all potential user equipment, but to receive sufficient feedback information from the user equipment to decide on the type of radio bearers to be used.

It is more important to reduce the chance of collisions of these feedback transmissions than it is to receive all of them. Thus, in the claimed invention, the potential number of feedback transmissions is *reduced* at the beginning of a time interval in which random transmissions are affected by the user equipment, while the potential number of feedback transmissions is *increased* toward the end of the time interval. This is described, for example, in connection with Figs. 6a and 6b. The second clause of claim 17, in particular, recites:

> Determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density with increasing delay, the random delay time being determined by the user equipment.

The exponential function shown in Fig. 6b, although having an inverse slope to that shown in Fig. 6a, results in the same effect. In the claimed invention, only user equipment with a random number equal or greater to the value of P(I) are allowed to transmit responses.

Consequently, the probability distribution increases in density with increasing delay in this case as well.

Neither Take nor Suzuki teaches, discloses, or suggests "determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density with increasing delay," as recited in claim 17. There is no change of the probability over time disclosed in Take. Rather, in Take, either the random number exceeds the threshold, in which case the channel shift is executed immediately, or else the random number is below the threshold, in which case the channel shift is postponed.

The Office Action, in fact, does not even assert that Take *does* show "a probability distribution that increases in density with increasing delay," as recited in claim 17. The Office Action, instead, asserts in section 3 of the top of page 3 that Take shows random numbers being generated, and probability being calculated when a packet is delayed. Neither generating random numbers nor calculating a probability when a packet is delayed amounts to "a probability distribution that increases in density with increasing delay" as recited in claim 17.

Take, in particular, shifts channels immediately if a probability exceeds a threshold value, or else delays the channel shift for a predetermined time, as described at column 13, lines 46-55:

> To make this determination, for example, random numbers are generated, probability Pb is calculated, and whether or not it exceeds a threshold value is determined. Channel shift is immediately executed at probability Pb (Yes at step S0606) or is delayed only for predetermined time Tb at probability 1-Pb (No at step S0606). While the shift is postponed, the mobile station waits for packet transmission on the first acquired RACH. The threshold value may be changed in response to the state of each mobile station.

Since Take is shifting channels immediately if a probability exceeds a threshold value, or else delaying the channel shift for predetermined time, Take is not "determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density with increasing delay," as recited in claim 17.

Suzuki, for its part, appears to be calculating a delay time according to the number of mobile stations, excluding itself, that are currently transmitting or receiving data in a radio zone, and thus cannot make up for the deficiencies of Take.

Suzuki, moreover, generates a *random* number in the calculated maximum random delay

time, as shown in Fig. 6 and described at column 9, lines 13-22:

> Using the above equation, each mobile station further generates a random number in the calculated maximum random delay time, and sets the number in the timer (step B4). The timer value set by generating a random number is started (step B5). When time-out of the timer occurs (step B6), the CPU 65 analyzes the collision control units (I/B) from the de-scrambled received data. When the CPU 65 detects a slot of the transmission allowed (I), it outputs the first unit transmission start instruction to the transmission control unit 61 once again.

Since each mobile station in Suzuki generates a random number in the calculated maximum random delay time, Suzuki is not "determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density with increasing delay" either, and thus cannot make up for the deficiencies of Take with respect to claim 17. Thus, even if Take and Suzuki were combined as proposed in the Office Action, claim 17 would not result. Claim 17 is submitted to be allowable. Withdrawal of the rejection of claim 17 is earnestly solicited.

Claims 18, 19, 20, and 29 depend from claim 17 and add further distinguishing elements. Claims 18, 19, 20, and 29 are thus also submitted to be allowable. Withdrawal of the rejection of claims 18, 19, 20, and 29 is also earnestly solicited.

Claims 33 and 34:

The third clause of claim 33 recites:

> Using the time variable information to determine delay times for transmitting signals on an uplink access channel from the user equipment, the time variable information varying based upon a probability distribution which increases in density with increasing time.

Neither Take nor Suzuki teaches, discloses, or suggests "using the time variable information to determine delay times for transmitting signals on an uplink access channel from the user equipment, the time variable information varying based upon a probability distribution which increases in density with increasing time," as discussed above with respect to the rejection of claim 17. Claim 33 is thus submitted to be allowable, for at least those reasons discussed above with respect to the rejection of claim 17. Withdrawal of the rejection of claim 33 is earnestly solicited.

Claim 34 depends from claim 33 and adds further distinguishing elements. Claim 34 is thus submitted to be allowable as well. Withdrawal of the rejection of claim 34 is earnestly

solicited.

Claim 35:

The second clause of claim 35 recites:

> A transmitter to transmit a time variable information in downlink to user equipment located in an area covered by the base station, wherein the information is used in the user equipment to determine delay times for transmitting signals on an uplink access channel and wherein the information varies based upon a probability distribution which increases in density with increasing time.

Neither Take nor Suzuki teaches, discloses, or suggests "a transmitter to transmit a time variable information in downlink to user equipment located in an area covered by the base station, wherein the information is used in the user equipment to determine delay times for transmitting signals on an uplink access channel and wherein the information varies based upon a probability distribution which increases in density with increasing time," as discussed above with respect to the rejection of claim 17. Claim 35 is thus submitted to be allowable as well, for at least those reasons discussed above with respect to the rejection of claim 17. Withdrawal of the rejection of claim 35 is earnestly solicited.

Claim 36:

Claim 36 recites:

> A calculation unit to determine a delay time for transmitting a signal on an uplink access channel, wherein the delay time is randomly determined based upon a probability distribution that increases in density with increasing delay.

Neither Take nor Suzuki teaches, discloses, or suggests "a calculation unit to determine a delay time for transmitting a signal on an uplink access channel, wherein the delay time is randomly determined based upon a probability distribution that increases in density with increasing delay," as discussed above with respect to the rejection of claim 17. Claim 36 is thus submitted to be allowable as well, for at least those reasons discussed above with respect to the rejection of claim 17. Withdrawal of the rejection of claim 36 is earnestly solicited.

Claim 37:

The second clause of claim 37 recites:

> Wherein the information varies based upon a probability distribution which increases in density with increasing time.

None of the cited references teach, disclose, or suggest "the information varies based

upon a probability distribution which increases in density with increasing time," as recited in claim 37. Claim 37 is thus believed to be allowable.

Allowable Subject Matter:

The Applicant acknowledges with appreciation the indication that claims 21-28, 30, 31, and 32 contain allowable subject matter. Since no specific grounds of rejection were lodged against claim 37, claim 37 is believed to be in condition for allowance. It's

Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all of claims 17-37 are allowable over the cited references. Allowance of all claims 17-37 and of this entire application is therefore respectfully requested.

Finally, if there are any formal matters remaining after this response, the Examiner is invited to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge them to our Deposit Account No. 19-3935.

Respectfully submitted,

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